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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,739

09/25/2006

Kazuo Tagawa

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03/16/2010

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EXAMINER

VASISTH, VISHAL V

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

03/16/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/565,739	<b>Applicant(s)</b> TAGAWA ET AL.	
	<b>Examiner</b> VISHAL VASISTH	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on 12/22/2009 has been entered.

### ***Response to Amendment***

2. Applicants' response filed on 12/22/2009 amended independent claim 1 and added new dependent claim 17 and independent claim 18. For reasons discussed below applicants' amendments do not overcome the 35 USC 103 rejections over Kawahara in view of Shimomura. Applicants filed a terminal disclaimer therefore the double patenting rejection from the office action mailed on 12/8/2008 is withdrawn. New grounds of rejection necessitated by the amendment are set forth below.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1, 4-7, 9-14 and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimomura et al., JP Publication No. 2002-097486 (hereinafter referred to as Shimomura JP).

Shimomura JP discloses a refrigerating machine oil composition comprising a base oil such an ester derived from the reaction of a 1,2-cyclohexanedicarboxylic acid, iso-butanol and 2-ethylhexanol having a kinematic viscosity of 12.7 at 40°C (as recited in claims 1 and 9) (Para. [0150]/Base Oil 2 and Para. [0156]/Table 1), triphenyl phosphorothionate (as recited in claim 1) (Para. [0154]), tricresyl phosphate (as recited in claim 1) (Para. [0154]), an ester lubricant that can be formed by C<sub>1</sub>-C<sub>20</sub> straight-chain alkyl monoesters of a monobasic fatty acid having 12 or more carbon atoms and a monohydric alcohol having 1-24 carbon atoms (oil agent of claim 1 and ester oil agent as recited in claim 5 and linear dibasic acid and monohydric alcohol of claims 6-7, 10 and 14) (Para. [0039]-[0041]) and an epoxy compound (as recited in claim 4) (Para. [0125]).

Shimomura JP does not explicitly disclose the pour point of the base oil ranging from -40°C to -25°C as recited in instant claims 17 and 18. It is the position of the examiner that Shimomura JP discloses the same base oil recited in the instant claims and would therefore inherently have a pour point that is within the recited range.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

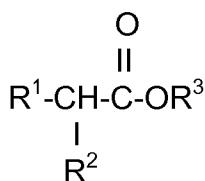
obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1 and 4-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara et al., US Patent No. 6,667,285 (hereinafter referred to as Kawahara).

The examiner notes that this is the US national phase application (therefore in English) of WIPO application No. WO/2000/068345 which is in Japanese but does have a 102(b) date in view of Shimomura et al., US Patent No. 6,228,282 (hereinafter referred to as Shimomura).

Kawahara discloses a lubricating oil composition for refrigerators comprising hydrocarbon oils (prescribed base oil as recited in claims 1 and 10) (Col. 3/L. 39), antiwear agents such as tricresyl phosphate (phosphorus-based extreme pressure agent as recited in claims 1, 10 and 12) and at least one aliphatic saturated branched-chain carboxylic acid monoalkyl ester represented by the formula:



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wherein when  $R^2$  is hydrogen,  $R^1$  is a branched-chain alkyl and  $R^3$  is  $C_1$ - $C_{20}$  straight-chain alkyl monoesters of a monobasic fatty acid having 12 or more carbon atoms and a monohydric alcohol having 1-24 carbon atoms (oil agent of claim 1 and ester oil agent as recited in claim 5 and linear dibasic acid and monohydric alcohol of claims 6-7, 10 and 14) (Col. 2-3/L. 64-15).

The composition of Kawahara may further contain other base oils such as alicyclic dicarboxylic acid esters esterified by monohydric alcohols (esters of alicyclic dibasic acids and monohydric alcohols as recited in claims 9 and 16) (Col. 14/L. 21-26 and Col. 15-16/L. 55-3) and epoxy compounds in order to improve thermal and hydrolytic stability (epoxy compound as recited in claims 4 and 13) (Col. 20/L. 59-68).

Kawahara further that the ratio of aliphatic saturated branched-chain carboxylic acid monoalkyl ester to hydrocarbon oil is 0.5:99.5 wt% to 99.5:0.5 wt% (which overlaps with the range as recited in claims 8 and 15).

Kawahara discloses all of the limitations as applied to claim 1 as discussed above. Kawahara discloses antiwear agents which include phosphate and phosphite compounds, and Kawahara further discloses the use of sulfur-based additives. Kawahara, however, does not explicitly disclose the use of a phosphorothionate and a phosphorus additive apart from the phosphorothionate.

Shimomura discloses a refrigerator oil composition comprising an alicyclic polycarboxylic acid ester compound, an epoxy compound and additives which improve wear resistance and load capacity such as phosphoric esters (phosphorus compound) and sulfur compounds to further improve wear resistance and load capacity such as

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phosphorothionates (as recited in claims 1 and 11-12) (Col. 7-8/L. 16-31). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the composition of Kawahara with the phosphorothionates of Shimomura in order to enhance the wear resistance and load capacity of the composition (Col. 8/L. 18-20 of Shimomura).

Kawahara in view of Shimomura do not explicitly disclose the pour point of the base oil ranging from -40°C to -25°C as recited in instant claims 17 and 18. It is the position of the examiner that Kawahara/Shimomura disclose the same base oil recited in the instant claims and would therefore inherently have a pour point that is within the recited range.

### ***Response to Arguments***

8. Applicants' arguments filed on 12/22/2009 with respect to claims 1 and 4-18 have been considered and are not persuasive.

Applicants argue that Shimomura does not explicitly disclose the combination of a phosphorothionate and a phosphorus-based extreme pressure agent as recited in the instant claims. This argument is not persuasive. Shimomura in column 7, lines 16-26, explicitly discloses the presence of at least one phosphorus compound in order to improve wear resistance and load capacity. Shimomura goes on to disclose specific examples of phosphorus compounds that maybe present in the composition. Shimomura further discloses the addition of sulfur-containing additives to further enhance wear resistance and load capacity which include phosphorothionates

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represented by formula (4) in Shimomura and corresponds to the formula for phosphorothionates recited in paragraph 0123 of the instant specification. One of ordinary skill in the art would envisage using both the phosphorus and sulfur-containing additives of Shimomura in a single composition from the disclosure of Shimomura. Furthermore, Shimomura is not being incorporated for its combination of a phosphorus and phosphorothionate additive. Shimomura is only being combined for its disclosure of phosphorothionate additives, the combination of a phosphorus additive and sulfur-containing additive is present in the composition of Kawahara.

Applicants argue that the present invention provides unexpected results and provide data in the specification that allegedly supports the applicants' position. However, the data submitted is not commensurate with the scope of the claims. For example, the inventive base oils in Tables 83-94 of the instant specification recite base oils that are very specific such as tetraester of pentaerythritol and an equimolar mixture of 2-ethylhexanoic acid and 3,5,5-trimethylhexanoic acid amongst others. Furthermore, the base oils are present in specific concentrations based on the concentration of additives in the lubricant composition.

Also, the phosphorothionate additives recited in Tables 83-94 include very specific concentrations of 0.5 wt%. The same can be said regarding the phosphorus-based extreme pressure agent other than the phosphorothionate, which in Tables 83-94 is also present at a concentration of 0.5 wt%. Furthermore, the oil agent recited in Tables 83-94 is a very specific compound that is also present in a very specific concentration of 0.5 wt%.



Finally, applicants need to compare their example oils against the closest prior art. Applicants have given no indication that their comparative formulations represent the closest prior art.

The examiner agrees that once a trend is shown by the data that unexpected results can be shown and extrapolation of the data can be done by the examiner to reach the conclusion of unexpected results. This, however, is usually done with concentration ranges which are NOT present in the independent claims. Also, applicants added 2 new claims with pour points, but the pour points of the base oils were only reflected in one of the independent claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VISHAL VASISTH whose telephone number is (571)270-3716. The examiner can normally be reached on M-R 8:30a-5:30p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571)272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

VVV

/Ellen M McAvoy/  
Primary Examiner, Art Unit 1797